UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,037	01/25/2006	Ingo Erkens	S4-03P09865	9315

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LERNER GREENBERG STEMER LLP
P O BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER
GAMI, TEJAL

ART UNIT	PAPER NUMBER
2121	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/566,037	ERKENS, INGO
	Examiner	**Art Unit**	
	Tejal J. Gami	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 October 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>16-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>16-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☒ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to an AMENDMENT entered October 02, 2007 for

the patent application 10/566037.

Status of Claims

2.   Claims 16-30 were rejected in the last Office Action dated July 02, 2007.

Claims 16-30 are now pending in this office action.

Priority

3.   Acknowledgment is made of applicant's claim for foreign priority based on an

application filed in (DE) on 07/25/2003. It is noted, however, that applicant has not filed

a certified copy of the 10334694.5 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 16-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Ehlers

et al. (U.S. Publication Number 2001/0010032).

As to independent claim 16, Ehlers discloses a method of determining a load

characteristic (e.g., load sensing and/or load control modules 24) indicating a load level

on an electrical primary component (e.g., circuit breaker) of an electrical power

distribution network (see Paragraph [0011]; and Figure 1), the method which comprises:

recording description values (e.g., load status) describing an operating state of

the primary component by way of a sensor (e.g., load sensing and/or load control

modules 24) connected to a field appliance (e.g., appliance control 24) carrying out

functions related to an automation of the power distribution network (see Paragraph

[0011]; and Figure 1);

determining an overall sum of the description values over a duration of at least

one predeterminable time interval to form a load intermediate value (e.g., consumption

calculations for the device over a chosen interval) (see Paragraph [0071]); and

producing the load characteristic in dependence on a magnitude of the load

intermediate value (e.g., level between the current that will be drawn) in comparison

with a predeterminable load limit value (e.g., threshold) (see Paragraph [0088]).

As to dependent claim 17, Ehlers teaches the method according to claim 16,

which comprises outputting the load characteristic (e.g., load sensing and/or load

control modules 24) from the field appliance (e.g., appliance control 24) or from a data

processing device connected to the field appliance (e.g., appliance control 24) (see

Paragraph [0011]).

As to dependent claim 18, Ehlers teaches the method according to claim 16,

which comprises producing a load signal (e.g., sensor output) and emitting the load

signal (e.g., sensor output) from the field appliance (e.g., appliance control 24) or from a

data processing device connected to the field appliance (e.g., appliance control 24), as

a function of the magnitude of the load characteristic (e.g., load sensing and/or load

control modules 24), when the load characteristic (e.g., load sensing and/or load control

modules 24) indicates that the load on the primary component (e.g., circuit breaker) is

particularly low and/or particularly high (see Paragraph [0088]).

As to dependent claim 19, Ehlers teaches the method according to claim 16,

which comprises utilizing a sensor (e.g., load sensing and/or load control modules 24)

that is already present in the automation system to record the description values (e.g.,

load status) (see Paragraph [0011]).

As to dependent claim 20, Ehlers teaches the method according to claim 16,

which comprises using as description values (e.g., load status) measured values of a

primary measurement variable (e.g., load sensing and/or load control modules 24) (see

Paragraph [0011]).

As to dependent claim 21, Ehlers teaches the method according to claim 20,

wherein the primary measurement variable is a current (e.g., current sensor) through

the primary component (e.g., circuit breaker) (see Paragraph [0088]).

As to dependent claim 22, Ehlers teaches the method according to claim 20,

wherein the primary measurement variable is a voltage (e.g., voltages and

currents)applied to the primary component (e.g., circuit breaker) (see Paragraph

[0011]).

As to dependent claim 23, Ehlers teaches the method according to claim 20, wherein the primary measurement variable is a temperature (e.g., temperature sensor 26) of the primary component (e.g., circuit breaker) (see Paragraph [0005]; and Figure 1).

As to dependent claim 24, Ehlers teaches the method according to claim 16, which comprises:

repeatedly producing the load characteristic (e.g., consumption calculations for the device over a chosen interval) (see Paragraph [0071]); and

adding successive load intermediate values in a sum memory to form an aging characteristic (e.g., history table 54) (see Paragraph [0074]).

As to dependent claim 25, Ehlers teaches the method according to claim 24, which comprises outputting the aging characteristic from the field appliance (e.g., appliance control 24) or from a data processing device connected to the field appliance (e.g., consumption calculations for the device over a chosen interval) (see Paragraph [0071]).

As to dependent claim 26, Ehlers teaches the method according to claim 24, which comprises:

generating, with the field appliance (e.g., appliance control 24) or a data processing device connected to the field appliance (e.g., appliance control 24), an aging signal (e.g., consumption calculations) as a function of a magnitude of the aging characteristic in comparison with a predetermined aging limit value (e.g., consumption calculations for the device over a chosen interval) (see Paragraph [0071]); and

outputting the aging signal (e.g., consumption calculations) from the field

appliance (e.g., appliance control 24) or the data processing device (e.g., consumption

calculations for the device over a chosen interval) (see Paragraph [0071]).

As to dependent claim 27, Ehlers teaches the method according to claim 24,

which comprises setting a sum memory to zero value on starting up the primary

component (e.g., zero) (see Paragraph [0106]).

As to dependent claim 28, Ehlers teaches the method according to claim 24,

which comprises setting a sum memory to a start value on starting up the primary

component (e.g., counter) (see Paragraph [0081]), the start value taking account of a

previous use of the primary component (e.g., previously read values) (see Paragraph

[0097]).

As to dependent claim 29, Ehlers teaches the method according to claim 24,

wherein the primary component is a circuit breaker (e.g., circuit breaker) with switching

contacts, and the method comprises determining the description values (e.g., load

status) in each case only while the switching contacts of the circuit breaker (e.g., circuit

breaker) are open (e.g., relay or switch) (see Paragraph [0011]).

As to dependent claim 30, Ehlers teaches the method according to claim 16,

wherein the primary component is a circuit breaker (e.g., circuit breaker) and the

method further comprises:

determining a number of switching processes (e.g., relay or switch) carried out by

the circuit breaker (e.g., circuit breaker) with the field appliance (e.g., appliance control

24) (see Paragraph [0011]; and Figure 1);

determining an aging switching value (e.g., relay or switch) from the number of

switching processes (Figure 1) (see Paragraph [0011]); and

outputting the aging switching value (e.g., relay or switch) or a warning message

derived therefrom with the field appliance (e.g., appliance control 24) (see Figure 1) or

with a data processing device connected to the field appliance (see Paragraph [0011]).

Response to Arguments

6.   Applicant's amendment and arguments filed October 02, 2007 have been fully

considered. The amendment does not overcome the original art rejection and the

arguments are not persuasive. The following are the Examiner's observations in regard

thereto.

Applicant Argues:

The invention, in contrast, deals with a concrete indication concerning the load level of a component in an energy supply network. By way of example, the result of the claimed determination with regard to, say, a given energy transmission line may be a load characteristic value of 90%. This indicates that the energy transmission line is being driven at 90% of its nominal capacity. No such indication can be had from the system described by Ehlers.

Examiner Responds:

Examiner is not persuaded. The claims and only the claims form the metes and bounds

of the invention. The Examiner has full latitude to interpret each claim in the broadest

reasonable sense. Applicant's specification Paragraph [0003] discloses characteristics

such as mean values, maximum and minimum values, standard deviations and

variances. Applicant's arguments are narrower in scope than presented as claimed

limitations. Neither the claims nor the applicant's specification describe the

characteristic to be a percentage. Under such considerations, a comparison is taught

by the prior art.

Applicant Argues:

Claim 17 deals with outputting the load characteristic value K1 by way of a field device or a data processing device connected therewith. In light of the fact that Ehlers does not develop a load characteristic value, as claimed, Ehlers cannot output such a value.

Examiner Responds:

Examiner is not persuaded. In addition to limitations presented in the rejection above,

see Paragraph [0088] for output. Under such considerations, the prior art anticipates

the claims as written.

Applicant Argues:

Ehlers does not provide for the outputting of a load signal, as required in claim 18. The load signal W1 may be likened to a warning signal that is output when the load characteristic value is extremely low or extremely high. The purpose is to recognize underutilized energy transmission lines or highly utilized such lines.

Examiner Responds:

Examiner is not persuaded. See Paragraph [0088] where Ehlers teaches a load signal.

Applicant Argues:

Claim 24 requires the additional calculation of an aging characteristic K2. For this purpose, a further summation is effected by successively summing the previously calculated load characteristics in order to form the again characteristic value K2. There is no useful information developed in Ehlers that could be used to describe the aging of individual components.

Examiner Responds:

Examiner is not persuaded. In addition to prior art cited in the above rejection, see

Figure 7 for consumed this interval; and Figures 11-15 for total energy used today;

Paragraph [0125] for total; and Paragraph [0004] for replace an aged appliance for

reduced energy consumption. Under such considerations, adding and aging are

anticipated by the prior art.

Applicant Argues:

The Examiner's reference to paragraph [0016] concerning claim 27 is not quite understood. We do not find any information in that disclosure that a starting value of zero should be set for the aging characteristic. This is done for a newly added component which has not been exposed to any load that could have triggered aging. Ehlers does not contain any information according to which a new component is marked with a zero aging characteristic.

Examiner Responds:

Examiner is not persuaded. In addition to limitations presented in Paragraph [0106],

see Paragraph [0081] where Ehlers teaches a zero counter for the request history data.

Under such consideration, zero or no data is taught by the prior art.

Applicant Argues:

Similarly, with regard to claim 28, paragraph [0016] of Ehlers also does not contain any information which would tend to show the feature according to which the aging characteristic may be set to a value different from zero, thus taking into account the loading history of the component. This, of course, is advantageous if a previously used and/or refurbished transformer is integrated into the energy supply network.

Examiner Responds:

Examiner is not persuaded. In addition to limitations presented in the above, see

Paragraph [0004] for reduced energy consumption, replace an aged appliance. Under

such consideration, the prior art teaches taking into account previous use.

Applicant Argues:

With regard to claim 30, Ehlers does not disclose utilizing a counter, i.e., the switching processes of a counter, to determine the aging characteristic value. Such information is not found in paragraph [0011] of the reference nor in any other portion of his disclosure.

Examiner Responds:

Examiner is not persuaded. See Paragraph [0011] where Ehlers teaches monitoring power consumed by the load from which energy consumption may be calculated and place messages to indicate changes in load status. Under such considerations, the prior art teaches the claims as written.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hardy et al. (U.S. Patent Number: 4,525,763) teaches apparatus and method to protect motors and to protect motor life.

Allina (U.S. Patent Number: 5,596,468) teaches transient voltage surge suppression.

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tejal J. Gami whose telephone number is (571) 270-

1035. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Vincent can be reached on (571) 272-3080. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Vincent
Supervisory Patent Examiner
Tech Center 2100

TJG
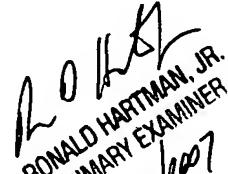
RONALD HARTMAN, JR.
PRIMARY EXAMINER